

## REMARKS

Claims 1-34 remain for further consideration. No new matter has been added.

The objections and rejections shall be taken up in the order presented in the Official Action.

2. The drawings currently stand objected to under 37 C.F.R. §1.83(a).

The Official Action alleges that the drawings do not illustrate the feature "*a loudspeaker having a resonant volume formed by a first cavity situated inside of the at least one door and the second cavity situated inside a structural component of a frame of the at least one door and outside of any other door within the vehicle.*" (Official Action, pg. 2). However, the undersigned attorney has carefully reviewed the drawings and confirms that each feature set forth above is indeed illustrated in the claims. For example, a loudspeaker is shown in FIGs. 1-8. A resonant volume is illustrated in FIGs. 1-9. A second cavity situated inside a structural component of a frame of the least one door and outside of any other door within the vehicle is illustrated by, for example, the B pillar 6, the sill 7, and/or the A pillar 4. FIG. 2 illustrates an example of a resonant volume formed by a first cavity within the housing 17 and a second cavity within the support 5 and/or the sill 7. The support 5, the B pillar 6 and the sill 7 are each components of a frame of the at least one door, and are outside of any other door within the vehicle. Accordingly, it is respectfully submitted that each and every feature of the claims is shown in the drawings. If the Examiner maintains this rejection, then the undersigned respectfully submits that the Examiner states with specificity which feature is allegedly not shown in the drawings.

3. The specification currently stands objected to for allegedly introducing new matter.

The Official Action alleges that the added material not supported by the original disclosure is “*a loudspeaker having a resonant volume formed by a first cavity situated inside of the at least one door and a second cavity situated inside a structural component of a frame of the at least one door and outside of any other door within the vehicle.*” (Official Action, pg. 3). However, as set forth above, this claim feature is clearly illustrated in numerous drawings of the application. In addition, the application is replete with instances discussing how the resonant volume of the speaker is expanded by using cavities outside the first cavity situated inside of the at least one door. For example, with respect to FIG. 1, the specification states, “*the door volume 9 is coupled to the additional volumes by coupling devices 10, 11 and 12.*” (pg. 8, lines 5-6 of originally filed application). Couplings 10, 11 and 12 couple the door volume 9 with the B-pillar 6, the sill 7 and the A-pillar 4, respectively. The claimed feature of the “*second cavity situated inside a structural component of a frame of the at least one door and outside of any other door within the vehicle*” reads on for example any of the B-pillar 6, the sill 7 or the A-pillar 4, which are each disclosed at length in the specification as filed. Therefore, again it is respectfully submitted that the feature alleged to be new matter is prominently illustrated in the figures and also prominently discussed in numerous locations in the specification. Accordingly, it is respectfully submitted that this new matter rejection be withdrawn.

**4-6.** Claims 1 and 28 currently stand rejected to for allegedly failing to comply with the written description requirement.

Claims 1 and 28 currently stand rejected under 35 U.S.C. §112, first paragraph, for allegedly failing to satisfy the written description requirement. The Official Action alleges that the specification does not support the newly added features of a second volume situated inside a structural component of a frame of the at least one door and outside of any other door within the vehicle. The present application discloses in numerous locations that additional volumes may be provided, for example, by: (i) the volume in the B-pillar 6 (ii) the volume in the sill 7, or (iii) the volume the A-pillar 4. Since the volume in the B-pillar, the volume in the sill and the volume in the A-pillar are all structural components of a frame of the at least one door and are outside of any other door within the vehicle, these structural components clearly provide the necessary written description of the claim feature at issue. As known, it is not necessary that the exact words appearing in the claim also appear in the specification.

**7-8.** Claims 1-4, 12-19, 21 and 24-27 currently stand rejected for allegedly being anticipated by Japanese Patent JP 07-267003 to Otani (hereinafter “Otani”).

### **Claim 1**

Claim 1 recites a sound system for a vehicle having at least one door. The system includes:

“a loudspeaker having a resonant volume formed by a first cavity situated inside of the at least one door and a second cavity situated inside a structural component of a frame of the at least one door and outside of any other door within the vehicle; and

means for pneumatically coupling the first and second cavities to form the resonant volume.” (cl. 1)

The Official Action alleges that the claimed feature “*a second cavity situated inside a structural component of a frame of the at least one door and outside of any other door within the vehicle*” reads on the elements 5a, 5a’ and 5b of Otani. (see Official Action, pg. 11, Response to Arguments). Specifically, the Official Action alleges that the claimed first cavity reads on element 5a, and the claimed second cavity reads on elements 5a’, 5b of FIG. 1 of Otani. However, it is respectfully submitted that the claimed invention as a whole is not being considered. Claim 1 recites that **a resonant volume is formed** by the first and second cavities. Since elements 5a’ and 5b of Otani are merely openings connected by a tube pipe 6, a resonant volume is not formed by merely connecting the first opening part 5a with the second open end 5b via the tube pipe 6, since the tube pipe 6 includes the second open end 5b, preventing the system from operating as a resonant volume. That is, acoustic energy is free to pass through second open end 5b, and thus out of the second cavity of the Official Action’s construction. Accordingly, it is clear that reading the claimed first cavity onto element 5a, and the claimed second cavity onto elements 5a’, 5b results in a system incapable of forming the claimed resonant volume.

### **Claim 21**

Claim 21 recites a sound system for a vehicle having at least one door. The system includes:

“a loudspeaker having a resonant volume formed by a first cavity situated inside of the at least one door and by a second cavity situated outside of the at least one door, where the second cavity comprises a volume defined within hollow parts of a support frame of the vehicle; and

means for pneumatically coupling the first and second cavities to form the resonant volume.” (emphasis added, cl. 21)

As set forth above with respect to claim 1, it is again respectfully submitted that reading the claimed second cavity onto elements of 5a', 5b of Otani is improper since the resultant system would not operate as a resonant volume. Accordingly, Otani is incapable of anticipating claim 21.

### **Claim 28**

Claim 28 recites a sound system for a vehicle having at least one door. The sound system includes:

“a loudspeaker having a resonant volume formed by a first cavity situated inside of the at least one door and by a second cavity situated outside of the at least one door, where the second cavity comprises a volume inside a structural component of the frame of the at least one door; and

means for pneumatically coupling the first and second cavities to form the resonant volume.” (emphasis added, cl. 28)

As set forth above with respect to claims 1 and 21, it is yet again respectfully submitted that reading the claimed second cavity onto elements of 5a', 5b of Otani is improper, since the resultant system would not operate as a resonant volume. Audio waves are allowed to pass through opening 5b of Otani, thus preventing the hypothetical system that results from construing the claimed second cavity as elements 5a', 5b as the second cavity from working as a resonant volume. Accordingly, Otani is incapable of anticipating claim 28.

**9-10.** Claims 5-11, 20, 22-23, and 29-34 currently stand rejected for allegedly being obvious in view of Otani.

It is respectfully submitted that the rejection of these claims is now moot, since these claims depend from claims patentable for at least the reasons set forth above.

For all the foregoing reasons, reconsideration and allowance of claims 1-34 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,



Patrick J. O'Shea  
Reg. No. 35,305  
O'Shea, Getz & Kosakowski, P.C.  
1500 Main Street, Suite 912  
Springfield, MA 01115  
(413) 731-3100, Ext. 102